

NOMENCLATURE PRIORITY IN THE UREDINALES¹

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IN FORMULATING the International Rules of Botanical Nomenclature,² which were the result of deliberations at the Botanical Congress of 1905 and 1910, the year 1753 was selected for the beginning of nomenclature for the various classes of plants, with a few exceptions, among them being that of the Uredinales (see Art. 19). The attempt to exclude from recognition in each group all names antedating the earliest important general treatise using binomial nomenclature led to the selection of Persoon's *Synopsis Methodica Fungorum* of 1801 as a starting point for the rusts and some other fungi.

As the Rules are formulated with the avowed purpose of promoting so far as possible uniform procedure in the use of botanical names it is pertinent to inquire if the exception for the starting point for the Uredinales was well selected and whether it meets that end. The question at issue is not one of theory, sentiment or individual preference, but one of facts which can be demonstrated by statistics. If the valid species of rusts established in the forty-eight years between 1753 and 1801 tend to disturb the uniform usage of subsequent years the exception to the general Rule is justified. On the contrary, if the exception introduces disturbance or uncertainty in subsequent usage, the exception should be cancelled. To understand the situation it is well to review the establishment of genera and species antedating Persoon's publication of 1801.

The only genera of the Uredinales proposed during that period were *Aecidium*, 1791, and *Uredo* and *Puccinia*, 1794, each erected by Persoon. As these genera were recognized in the *Synopsis* of 1801 which one of the alternate dates is accepted for their establishment is immaterial. Before these dates species of rusts had been referred to *Tremella*, *Lycoperdon* and *Ascophora*, all non-rust genera.

During this interval of forty-eight years between 1753 and 1801 a comparatively small number of rust species were described. If we exclude names applied to aecidial stages, as the International Rules require, and all duplicated names and synonyms, there are left to be

¹Contribution from the Department of Botany, Purdue University Experiment Station.

²BRIQUET, JOHN. Règles Internationales de la Nomenclature Botanique, 110 pp., June, 1912.

considered in this connection only twenty-six names by six authors, viz.: Linnaeus (1753), Dickson (1785), Jacquin (1788), Schrank (1789), Tode (1790) and Persoon (1791-99). The majority of these twenty-six names were accepted by Persoon in his Synopsis without change, except to transfer to the genus *Uredo* such as were formerly in *Lycoperdon* and *Aecidium*.

Out of this list of twenty-six names, published prior to 1801, only the following residue of eight names that were not transferred to the Synopsis without change would be affected by an earlier date for the beginning of priority, all being founded, irrespective of generic assignment, upon the "perfect state," and all but one (*Uredo Helioscopiae*) on the teleutosporic form.

Antedating 1801	Synopsis, 1801
<i>Aecidium fuscum</i> Pers.	changed to <i>Aecidium Anemones</i> Pers.
<i>Tremella Sabinae</i> Dicks.	" " <i>Puccinia Juniperi</i> Pers.
<i>Ascophora disciflora</i> α Tode	" " " <i>mucronata</i> Pers.
<i>Puccinia Polygoni</i> Pers.	" " " <i>Polygoni-Aviculariae</i> Pers.
<i>Lycoperdon caryophyllum</i> Schr.	" " <i>Uredo Dianthi</i> Pers.
<i>Uredo Helioscopiae</i> Pers.	" " " <i>Euphorbiae-Helioscopiae</i> Pers.
<i>Uredo Fabae</i> Pers.	" " " <i>Viciae-Fabae</i> Pers.
<i>Uredo appendiculata</i> β Pisi Pers.	" " " <i>appendiculata</i> β <i>Pisissativae</i> Pers.

To justify the acceptance of 1801 for the beginning of rust nomenclature it must be shown that the eight names in the column for 1801 have been used by the majority of systematic uredinologists in preference to those antedating 1801. A search of the literature shows, however, that for more than a hundred years six out of the eight names were either not used at all, or only by one or two authors. *Uredo Dianthi* Pers. had been accepted by a few authors, while the one name receiving the greatest favor was that of *Puccinia mucronata* Pers., which was used by Strauss, 1810, Fries, 1815, Martius, 1817, Schlechtendahl, 1824, and some later authors, but since 1895 has been generally dropped in recognition of the earlier name. On the whole the usage up to the promulgation of the International Rules has been overwhelmingly in support of the names antedating 1801.

The usage of authors in general certainly shows no decided preference for the eight names of 1801 over the names previously established. For weightier evidence regarding the unbiased recognition of the earli-

est names that should be accepted it is best to turn to the more recent standard systematic works by authors of recognized ability, who had the facilities and inclination to make a careful taxonomic study. The following six standard works can be taken as a consensus of scholarly opinion regarding a suitable recognition of priority among the Uredinales.

Sydow (P. & H.), *Monogr. Ured.*, 1902-15, use all the original eight specific names and none of 1801. The other five authors each employ all but one of the original eight specific names, and the exception is not taken from Persoon's *Synopsis* of 1801. They are:

Winter, *Pilze Deutschl.*, 1881.

Fischer, *Ed., Ured. der Schweiz*, 1904.

Trotter, *Flora Ital. Crypt., Ured.*, 1908-14.

Grove, *British Rust Fungi*, 1913.

Klebahn, *Krypt.-Fl. Mark, Brandenburg*, 1914.

No systematic work generally accepted as standard, which includes the eight names here considered, and which covers a wide geographical area, has been omitted from this list.

These facts undeniably show that the point of departure for nomenclature for the Uredinales in order to secure "fixity of names" and be "used by the great majority of naturalists in all countries," should be Linnaeus, *Species Plantarum*, 1753, and not Persoon, *Synopsis Methodica Fungorum*, 1801.

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